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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------|---------------------|------------------|
| 09/131,846   | 07/24/1998  | DONALD EUGENE DENNING | TU9-98-010          | 8393             |
| 42640  | 7590        | 09/27/2004            | EXAMINER            |                  |
| DILLON & YUDELL LLP<br>8911 NORTH CAPITAL OF TEXAS HWY<br>SUITE 2110<br>AUSTIN, TX 78759 |             |                       | BONZO, BRYCE P      |                  |
|  |             |                       | ART UNIT            | PAPER NUMBER     |
|  |             |                       | 2114                |                  |
| DATE MAILED: 09/27/2004  |             |                       |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                           |                  |
|------------------------------|---------------------------|------------------|
| <b>Office Action Summary</b> | Application No.           | Applicant(s)     |
|                              | 09/131,846                | DENNING ET AL.   |
|                              | Examiner<br>Bryce P Bonzo | Art Unit<br>2114 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 20 August 2004.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-18 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date .  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

**NON-FINAL OFFICIAL ACTION**

***Status of the Claims***

Claims 1-18 are rejected under 35 USC §102.

***Prior Actions***

The Examiner was **AFFIRMED** in appeal on June 30<sup>th</sup>, 2004.

This Non-Final Official Action is filed in response to the RCE of August 20, 2004.

***Rejections under 35 USC §102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Gates (United States Patent No. 5,701,409).

As per claim 1, Gates discloses:

specifying said hardware fault to simulate (column 2, lines 49-53: describes the loading of a command to deliberately cause a fault);

determining a signal to output utilizing said bus to simulate said hardware fault occurring on said expansion card (column 3, lines 38-46);

creating an analog voltage signal representative of said specified hardware fault utilizing a digital-to-analog voltage converter (column 3, lines 26-38; the digital-to-analog converter as described by Applicant is inherent to the PCI specification, and is described under the heading *Response to Amendments*); and

outputting said analog voltage signal during operation of said expansion card, wherein said hardware fault occurring on said expansion card is simulated (column 3, lines 26, 28)

As per claim 2, Gates discloses:

wherein said step of determining a signal to output utilizing said bus to simulate said hardware fault occurring on said expansion card further comprises the step of determining a signal to output utilizing a PCU bus to simulate said hardware fault occurring on said expansion card (column 3, lines 26-28: the error be simulated is an incorrect parity).

As per claim 3, gates discloses:

    further comprising the step of prior to outputting said analog voltage signal, determining a proper response of said system to said hardware fault (column 4, lines 12-18, 32-46, 54-64).

As per claim 4, Gates discloses:

    further comprising the step of in response to outputting said analog voltage signal, determining if said system responded properly to said hardware fault (column 3, lines 15-22).

As per claim 5, Gates discloses:

    further comprising the step of determining a line of said bus which is associated with said hardware fault (column 4, lines 58-64 and column 5, lines 8-62).

As per claim 6, Gates discloses:

    further comprising the step of outputting said analog voltage signal during operation of said expansion card utilizing said line of said bus (column 4, lines 58-64).

As per claim 7, Gates discloses:

    further comprising the step of determining a test voltage level for said analog voltage signal, wherein said test voltage level is a voltage level required to simulate said fault (column 4, lines 58-64).

As per claim 8, Gates discloses:

    further comprising the step of outputting said analog voltage signal having said test voltage level during operation of said expansion card utilizing said line of said bus (column 4, lines 58-64).

As per claim 9, Gates discloses:

    wherein the step of determining a signal to output utilizing said bus to simulate said hardware fault occurring on said expansion card further comprises the step of determining a signal to output utilizing a PCI bus to simulate said hardware fault occurring on said expansion card (column 4, lines 58-64).

Claims 10-18 are directed to the data processing embodiment of the method for simulating a hardware fault of claim 10-18 and are rejected on the same grounds.

***Response to Amendments***

Applicant has claimed a digital-to-analog voltage converter (DAC). Gates explicitly discloses the use of the PCI standard (Version 2.2 is provided to Applicant by the Examiner). The use of an interface to convert the digital signals of the expansion card into a real analog signal capable of transmission across a bus is inherent to PCI. PCI specification §4.2.5 discloses a listing of the analog properties. The concept of parity is a digital abstraction based on the manipulation of real world analog voltages on in computer components. As Gates clearly takes a digital realm abstraction and uses it to drive a real world bus with analog voltages (as required by PCI), this in the view of the Examiner satisfies the requirements for a digital to analog converter as disclosed by Applicant's specification.

Gates implicitly discloses presence of the converter discussing "digital highs" and "digital lows." These terms show Gates is clearly aware there are analog aspects to his invention, and uses digital to differentiate between the digital and analog domain.

Gates additionally discloses that the system has real world analog buses in Figures 4, gates shows a bus transition. The PERR# line is at clock cycle 116-117 as passing through continuously through every value between high and low over a non-zero time. Thus this voltage is analog, as a digital signal would jump *instantaneously* from high to low *without* passing through intermediate values.

Additionally, Applicant's digital to analog converter is required circuitry for PCI to operate. Specifically, it is the required bus driver circuitry used to ensure that the

voltages conform to the PCI bus specification. As such, as PCI requires this circuitry, Gates must therefore have the same or equivalent circuitry.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P Bonzo whose telephone number is (703) 305-4834 or upon moving to the new facilities in Alexandria (571) 272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713 or upon moving to the new facilities in Alexandria (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Bryce P. Bonzo*  
Bryce P Bonzo  
Examiner  
Art Unit 2114